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Influences on the selection of dietetics as a career choice

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INFLUENCES ON THE SELECTION OF DIETETICS AS A CAREER CHOICE

by

Katharine A. Kobel

Submitted in partial fulfillment
of the requirement for the degree of
Master of Science

Rochester Institute of Technology

Rochester, New York

June 1993

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INFLUENCES ON THE SELECTION OF DIETETICS AS A CAREER CHOICE

Katharine A. Kobel

ABSTRACT

The purpose of this study was to gather information on factors which influence career-decision making in dietetics students. Self-administered questionnaires were completed by 1695 students in Plan IV/V dietetic programs throughout the country. Of the 156 schools which were mailed questionnaires, responses were received from 53.9% of the schools.

Demographic information revealed that 77.7% of the students were between the ages of 20 to 30 years old. Thirteen percent were over 30 years old, while 9.1% were less than 20 years old. The number of students from rural (26.8%) and urban (26.2%) areas were equally divided. The majority of students, 47%, came from a suburban community. The overwhelming number of students, 89.4%, were female, 10.6% were male. Ninety percent of the students were Caucasians, the remaining 10% was uniformly comprised of Asians (3.3%), Afro-Americans (3.0%), and Hispanics (2.1%).

The majority of students, 57.6%, reported making their career decision in college. Another 20.9% indicated their career decision was made during high school. Students who made their career decision after work experience comprised 10.5% of the population. Students rated interest in nutrition (97.9%) and job enjoyment (95.6%) as factors which were important in their decision to pursue dietetics. Other factors which were rated as having a positive impact on career choice included opportunities to help others (90.1%) and working with people (89.6%). Results were well distributed when students reported the degree of influence financial rewards played in their career selection.

No primary sources emerged when students evaluated the influences of various people and media resources on their career decision. Career choice appears to be influenced by a variety of sources.

While the overwhelming majority of students rated job enjoyment as an important factor in their career decision, other factors were more decision point specific. For example, Chi Square analysis revealed that students who decided to enter dietetics following work exposure were more likely ($X^2=26.24$, df 12, $P<.01$) to rate opportunities for advancement as very important. These same students were also more likely ($X^2=28.65$, df 12, $P<.01$) to rate part-time work opportunities as very important. Students who made their career decision after exposure to work experience were less likely than expected ($X^2=30.44$, df 12, $P<.01$) to indicate that a guidance counselor had influenced their choice. However, students who made their career decision after exposure to work experience were more likely than expected ($X^2=86.27$, df 12, $P<.001$) to indicate that an employer had a high degree of influence on their career decision. Students who made their career decision in college were less likely than those who made decisions at other times ($X^2=78.67$, df 12, $P<.001$) to report that a teacher had low influence on their career decision.

These findings identify the need for recruitment strategies to be audience specific. Since career decision-making appears to occur during one of three time frames (in high school, college and during work experience) recruitment activities should be developed to specifically target students in these areas. In addition to general information, specific factors which have been demonstrated to be important to the target population should be included.

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Chapter 1

INTRODUCTION

Background and Scope

It has long been established that proper nutrition has played an important role in health promotion, and may have rehabilitative effects in some disease states. Current research has demonstrated that the risk of certain cancers, heart disease and osteoporosis can be decreased by consuming a healthy diet. Nutrition has been repeatedly shown to be one of several modifiable risk factors in preventing the development of these leading causes of morbidity and mortality.

The high incidence of some cancers, heart disease, and osteoporosis in the American population has in part been attributed to poor dietary habits – too much fat, too little fiber, and not enough Vitamins A and C, or Calcium. The prevalence of these serious health problems, coupled with the concern over escalating health care costs, has prompted the medical community to re-evaluate the traditional medical model. Historically, the field of medicine has primarily concentrated on disease treatment. Currently, health professionals are redirecting their focus toward prevention and wellness. This redefining of health priorities is expected to continue to generate expanded employment opportunities in many areas of health care, including dietetics. The Bureau of Labor Statistics has projected that the growth rate for dietitians will increase by 34% between the year 1986 and 2000 (Dalton, Gilbride, & Luder, 1991).

Other factors have contributed to the anticipated growth of the profession of dietetics. Little noted that the increase in the projected need for registered dietitians and other allied health personnel can be attributed to “demographic

changes in the U.S. population” (Little, 1989, p. 2). Typically, as individuals age they require more medical and allied health related services. The shift in the population base to a larger body of older adults has increased the need for service providers.

Other factors which were identified as positively impacting the need for dietitians included: an increased desire on the part of consumers for nutritional advice, “the trend toward private practice”, new employment opportunities, an increase in public interest for improved health, “and a greater perception of the importance of good nutrition” (Little, 1989, p 4). These factors, an aging population, and scientific research which demonstrates the important role nutrition plays in achieving and maintaining good health are all factors which have significantly contributed to the increased need for nutritional professionals.

As the demand for registered dietitians continues to expand, the number of students seeking enrollment in dietetic programs has shown a decline. Markley and Huyck attribute the declining applicant numbers to several factors including “declining enrollments in higher education, new opportunities for bright young women who were the primary candidates for dietetic profession, and the under representation of minorities. . .” (Markley & Huyck, 1992, p. 1). If the projected growth rates for dietitians prove to be accurate, and declining enrollment in dietetic programs continues, a shortage of dietitians is probable. A shortage of nutritional care professionals may directly affect consumers’ nutritional status and health.

By determining which factors significantly influence career recruitment in the field of dietetics, it may be possible to avert this impending shortage of nutrition experts, and thus better meet the needs of consumers. Unfortunately, there has been little research available on how to effectively recruit potential

students into the field of dietetics (Dunford & Caid, 1991). Only when professionals have sound scientifically based information can they begin to positively impact recruitment efforts. Recruitment initiatives which are developed from data-based information will better promote dietetics as a viable career option.

Statement of the Problem

Colleges and universities have been experiencing decreased enrollment in their dietetic programs. At the present time, little information is available on recruitment in the field of dietetics, to aid those who desire to reverse this situation.

Purpose

The purpose of this research was two-fold. First, the study examined at what point individuals make their career decision when selecting the field of dietetics. Secondly, factors which influenced career decision were examined.

Research Questions

The research explored the following five questions:

1. At what point in time did the majority of students make their career choice?
2. What factors influenced career choice for students pursuing dietetics?
3. Is there a relationship between factors that influenced the decision to become a dietitian and the time when the decision was made?

4. What persons influenced the career choice for students pursuing dietetics?
5. Is there a relationship between persons who were found to influence career decision and the point in time the decision was made?

Assumptions

Several factors may have contributed to the declining number of students entering the field of dietetics. Students responded to questions which asked them to reflect on career decisions which could potentially have been made several years ago. The recall on information from long term decisions is often not as accurate as short term decisions.

The type and degree of influence factors have on career choice may vary from profession to profession. For the purpose of this study, the assumption was made that the factors which influenced dietetic students to pursue dietetics are similar to those which will influence potential students to pursue this field.

Chapter 2

REVIEW OF THE LITERATURE

Career choice is one of the most difficult decisions a person will make in his or her lifetime (Gilley & Galbraith, 1989). It impacts many areas of a person's life. Current research offers little information about career decision making in the field of dietetics.

In order to obtain a clearer perspective on factors which affect career selection some background information is useful. Authors Gilley and Galbraith define "career selection" as "the process of selecting individual career objectives and devising developmental activities that will achieve them" (Gilley & Galbraith, 1989, p. 1). They also noted that career development is a complex process and involves cultural, social, personal and psychological factors. The authors refer to the combination of these factors as an "occupational filter". All potential career opportunities are screened through this occupation filter. Cultural and social factors serve as the foundation from which occupational selection occurs. These two factors form the first and second layers of the occupational filter (Gilley & Galbraith, 1989).

An individual's culture, subculture, social class--collectively referred to as "cultural characteristics" provides the earliest influences on an individual's career selection. Gilley and Galbraith (1989) reported that a person's culture is the "most fundamental determinant" of his/her behavior.

The main process of socialization occurs in the family unit where an individual's values and preferences are shaped (Gilley & Galbraith, 1989). Beyond the family, subcultures, such as racial groups, and geographic areas also help persons clarify what career they will pursue (Gilley & Galbraith, 1989).

One explanation for minority group under-representation in some health related fields (Crawford & Olinger, 1988) may be the subcultures' perceptions and values toward the profession. If a subculture devalues a profession a lack of role models and information may occur.

Social factors represent the second layer of the screening process for career selection. Social factors include reference groups, the family, and centers of influence. Reference groups "influence the attitudes, beliefs, opinions, and values of its members" (Gilley & Galbraith, 1989, p. 2) Close friends, neighbors and co-workers are included in the primary reference group. Those with whom persons have less contact with, but still, "serve as a reflection of opinion," would be considered in the secondary reference group (Gilley & Galbraith, 1989, p. 2). Reference groups can significantly influence an individual in a variety of ways. First, a reference group "can expose an individual to possible career opportunities"; secondly, these groups "can alter an individual's career selection"; and third, because the members do "share similar attitudes, beliefs and values" they can impact an individual's self-concept (Gilley & Galbraith, 1989, p. 2).

Another type of reference group is the family. This social group has been shown to play a very important role in "influencing an individual's attitudes, beliefs, opinions, and values regarding careers. An individual's personal ambition, self-worth, and drive are often acquired from the family, and these characteristics can greatly influence the selection of a career area" (Gilley & Galbraith, 1989, p. 2).

Centers of influence, also known as opinion leaders, are individuals who maintain "strong followings because they exhibit outstanding leadership qualities, charisma, credibility, and persuasive skills. They can greatly influence

the opinions of an individual regarding career selection because of these personal traits.” “Centers of influence, however, may not be career specialists or expert ...” (Gilley & Galbraith, 1989, p. 2). One study of 11th and 12th grade students reveals that 55% of the students' centers of influence (schoolmate, friends, etc.) were “individuals with limited career information” (Lucas, 1985, p. 1).

While cultural and social factors affect career choice, intrapersonal factors probably are most important in career decision making (Gilley & Galbraith, 1989). Personal factors which include “the individual's age and life cycle, economic circumstances, life style, and personality” represent the third layer of the occupational filter (Gilley & Galbraith, 1989, p. 2). An individual's attitudes, beliefs and values are in a dynamic state. Needs and interest change with age and experiences. With maturity comes the narrowing of the number of occupations one finds acceptable, thus fine-tuning career selections (Gilley & Galbraith, 1989).

Career selection is further refined and narrowed by social class. Social classes are often “hierarchically ordered and homogeneous in nature,” with members sharing similar “values, interest, and behaviors” (Gilley & Galbraith, 1989, p. 2). Gilley and Galbraith (1989) note that “the income level, attitude toward education, and value orientations of a social class greatly influence the selection of occupations. These factors tend to perpetuate certain occupations within a social class” (Gilley & Galbraith, 1989, p. 2). For example, (particularly in the past) when a parent was employed as a factory worker, the child often pursued a similar occupation. Because a social class often restricts or encourages certain activities of its members it is often referred to as a “gate-keeping mechanism” (Gilley & Galbraith, 1989, p. 2).

By the year 2020, 25% to 30% of this country's population will be composed of blacks and Hispanics (Markley & Huyck, 1992). In the Report of the 1984 Study Commission on Dietetics, the Commission notes, "While no effort has been made in the past to restrict other racial groups, or males, from the profession, little has been done to make the profession more attractive to them, nor has any strong effort been made to recruit them." The Commission acknowledges that "studies have shown that minority students have much less exposure to and understanding of the health profession in general than non-minority students. Because this is true, even greater efforts will be required to provide minority high school students with some exposure to the career opportunities in dietetics." (Report of the 1984 Study Commission on Dietetics, 1985).

Personal attitudes toward money and finances are important issues in career selection. Economic circumstances irrespective of whether they are positive or negative "serve as a catalyst for future career decisions" (Gilley & Galbraith, 1989, p. 3). The lifestyle a person chooses and his or her personality are also factors which affect career selection. Accordingly people seek out environments and job opportunities which allow them to use their skills and abilities while expressing their values and attitudes (Gibson & Mitchell, 1981). The age/life cycle, economic circumstances, life style, and personality all influence a person's perception of possible career areas and form the third layer of the occupational filter (Gilley & Galbraith, 1989).

The final filtering process includes factors such as attitude, beliefs, perceptions and motivation. These factors collectively referred to as psychological factors play the most influential role in career decision-making. Each stage of the filtering process further narrows the occupational choice.

Individuals seek out occupations which meet their needs (Gilley & Galbraith, 1989). Successful recruitment strategies should teach about factors which potential students can use in their occupational screening process.

Given the complexity of the career selection process several important areas emerged. Ultimately personal and psychological factors had the strongest impact on career choice. Thus, understanding of career choice and ultimately recruitment should include these factors. But in addition, the family, the culture, and influential persons also affected career choice.

When examining career selection in dietetics specifically, the major study of note is one which was initiated by the American Dietetic Association (ADA). The Association had become “increasingly concerned about the current educational crisis evidenced by the low student population, unprepared candidates and competition among other professions to attract qualified candidates” (Rodenstein, 1990, p. 3). With recognition of the need for more information in the late 1980’s the ADA funded a study “in an attempt to learn more about the various factors that influence current and projected career recruitment of the population into dietetic careers.” The purpose of the study was to investigate how and when dietetic students make career decisions. This was achieved through a search of the career decision-making literature and information provided by current students in a nationally data-based survey (Rodenstein, 1990). The proposed outcome of the study was to help the ADA “develop a plan to recruit capable students into the profession” (Rodenstein, 1990 p. 3). The research questions addressed in the study reflect important questions for the dietetic profession and serve as a framework for the remainder of the literature review. Some of the questions Rodenstein (1990) explored about the dietetics profession included:

- 1.) What is the best age to expose students to a profession?
- 2.) What is the best age to recruit students into a profession?
- 3.) What is the most effective means to communicate career information?
- 4.) What interests students about careers?
- 5.) What/who influences students about careers?

The review of the literature will address each of these questions using Rodenstein's work, as well as other relevant research.

What is the Best Age to Expose Students to a Profession?

Rodenstein's (1990) review of the literature suggests that a person's career decision is based on a series of decisions over a period of time. Since this continuum of choices is a developmental process, students should be exposed to appropriate career-related activities throughout elementary, middle and high school. Career information provided to students should include the psychosocial aspects of a career, as well as objective information, such as salary ranges. Providing multi-faceted career information aids the student in moving through the career exploratory process to a point of decision (Rodenstein, 1990). Rodenstein notes career selection is "continually being shaped by an interplay of a variety of elements such as self-knowledge, knowledge about training, educational and occupational opportunities, genetic and early childhood influences, evolving personality styles, and patterns of traits that individuals express cognitively and psychologically in their behavior and career identity" (Rodenstein, 1990, p. 6). However, there are likely specific times during the course of career development when an individual is more receptive to career information (Rodenstein 1990).

What is the Best Age to Recruit Students into a Profession?

To a large extent the best age for initiating recruitment activities will be determined by the particular point(s) in life that most students make their career decision. To date, there have been two national studies on recruitment in the field of dietetics reported in the literature. Rodenstein's 1989 survey of student dietitians revealed that of the 600 respondents, 25% indicated they had made their career decision in high school. The majority of students, nearly 50%, "made their career decision when they were already in college or after they were 21 years old."

Markley and Huyck (1992) reported similar results in their survey of over 400 dietetic students. Compiled data from their self-administered questionnaires showed that 25% of the students became interested in dietetics before or during secondary school. The majority (43.9 %) of students indicated that they first became interested in this career while in college. Another 18% of the students reported making their career decision post college (Markley & Huyck, 1992).

Rodenstein's (1990) review of the literature suggested that career-oriented decisions are continually being refined. However, she noted that many students are not able to specify the career they want until college or later. Rodenstein goes on to summarize, "it is fair to say that there is not a best age to recruit a student into a profession but there are activities that can be utilized at particular stages of development that might interest a student in dietetics. It is important to be sure that the activity is suitable for the particular group of students and does fit into the developmental tasks which can be mastered at that stage" (Rodenstein, 1990, p. 10).

The data from both Rodenstein's and Markley and Huyck's studies

demonstrated that college and non-traditional students may be a significant source of potential dietetic students. Markley and Huyck (1992) noted that successful recruitment initiatives should be broad based, targeting not only high school students, but also college and second career students.

What is the Most Effective Means to Communicate Career Information?

The most effective way to disseminate career information including the type of materials and how its presented will vary depending on the developmental age of the student. During the elementary years Rodenstein suggested that students “be introduced to a broad range of less visible occupations.” She further suggested that career activities be “general in nature” since . . . “these students are too young to relate their strengths and limitations to a career . . .” (Rodenstein, 1990, p. 7).

Rodenstein reported that middle school students “should be exposed to a broad orientation of major occupational clusters. . .” The relationship between a student's school work and potential job opportunities should be demonstrated. Career information which is assimilated into classroom teaching may provide greater insight to students (Rodenstein, 1990, p. 7).

During high school, Rodenstein stated that the principle resource to communicate career information “should be observation of someone who is working in a particular job in addition to reading information about a job” (Rodenstein, 1990, p. 7). Rodenstein noted that according to the research “students seem to use informal resources more than formal ones” when making their career decision (Rodenstein, 1990, p. 8). She cautioned that students often lack the knowledge and skill to obtain the information they need from reference books. For career information to be assimilated by the student it must

be “personalized” to “engage the student” (Rodenstein, 1990, p. 10).

“In other words, simple exposure to information is insufficient” (Rodenstein, 1990, p. 8). Rodenstein further adds that “unless the student can hear and see a clear picture of what the job entails and how it will feel to work in a certain career, the information will not be effectively communicated and digested” (Rodenstein, 1990, p. 10).

Markely and Huyck’s findings add further credence to Rodenstein’s recommendations. It appears that a course in nutrition or contact with a dietitian are good vehicles to “personalize” the message of dietetics. Data from Markely and Huyck (1992) study revealed that these two factors had a significant influence on the decision of potential students to pursue dietetics. The authors further suggested that marketing strategies should include “exposing” students to nutrition through a course and bringing students in contact with dietitians.

What Interests Students About Careers?

Before a student can be influenced to pursue a career, an interest in the career must be engaged. To elicit information on what interested students about this field, Rodenstein asked respondents to check “the factors that attracted them to the field of dietetics.” Results of her data showed the top three “attractions” were “special abilities that you have” (70%), “challenges on the job” (67%) and “job tasks you will complete” (60%) (Rodenstein, 1990, p. 19). “Status” and “salary and fringe benefits” received the lowest number of responses, 23% and 20% respectively. Rodenstein suggested that “recruitment efforts should focus on the challenges that dietitians have in their jobs and the fact that this is a career where specially talented people can succeed. Status

and salary were not perceived as being an attraction to the field” (Rodenstein, 1990, p.19).

What Influences Students About Careers?

What influences students about a career and motivates them to eventually select a specific career is a complex process which occurs over time. Many factors may sway a person’s career choice. To obtain career information, students in Rodenstein’s (1990) survey were asked to rate the influence various factors had on their decision to become a dietetic practitioner. “Working conditions”, “opportunity for developing skills”, and “challenge in my job” were rated as either “important” or “very important” by over 90% of respondents (Rodenstein, 1990). However, according to Rodenstein the high priority of importance assigned to the above factors made it “clear” that dietetic students were “looking for a place to excel and develop skills”. She further stated that “although pay, fringe benefits and prestige are still important, they are not as important as the need for an interesting job that is secure and at the same time offers a challenge and opportunities” (Rodenstein, 1990, p. 19).

Markley and Huyck, using their self designed questionnaire, pursued information which was similar to Rodenstein’s. The researchers asked students to rank the degree of influence several factors had on their decision to become a dietitian. Markely and Huyck’s (1992) study found that an “opportunity to help others; the relationship between nutrition and health; and an interest in health”, were highly rated positive factors (Markley & Huyck, 1992, p. 937). Similar to Rodentein’s research, Markley and Huyck found that financial rewards were among the factors which did not appear to influence career choice.

In an effort to obtain more complete information, students in Markley and Huyck’s study were also asked to identify and rank career factors. Compiled

survey results revealed that students selected: “health, disease and health care”, “teaching and health promotion” and “sports and fitness” as their top three interests. Two other frequently selected choices included interests in: “counseling and behavior changes,” and “food and cooking” (Markley & Huyck, 1992, p. 936).

A 1974 national study of college freshmen who were aspiring to be dietitians reported that the primary reasons for their career choice were “altruistic”. The report further stated that, “as group, those pursuing dietetics seemed traditionally feminine in outlook... Indeed, since their top-ranked goal was raising a family, they seemed to be more conventionally feminine than either the average female student or other women aspiring to nursing and allied health (NAH) professions” (Freshman Interested in Nursing and Allied Health Professions, 1977, p. 101). “The four life goals considered essential or very important by at least half of the aspiring dietitians ...were raising a family (endorsed by 68.1 percent ...), helping others in difficulty (65.7 percent ...), developing a meaningful philosophy of life (61 percent ...) and becoming an authority in one’s field (59 percent ...) ...” The national study summarized their findings by reporting that those aspiring to be dietitians were “conventional” in their outlook. They gave primarily “altruistic”, “people oriented”, “along with intrinsic” reasons for choosing dietetics as their career choice. Other than wanting to have management responsibilities which included supervising others, and succeeding in their “own business” aspiring dietitians showed “little concern with achievement and status” (Freshman Interested in Nursing and Allied Health Professions, 1977, p. 99).

While Rodenstein’s, Markley and Huyck’s studies did not address the influence personal issues, such as desire to raise a family, had on career

choice, similarities between these two studies and the 1974 national study seem to exist. Data from each of these three studies endorsed the image of the student dietitian as someone who is interested and concerned with helping others. Monetary compensation appeared to be secondary to other less tangible aspects of the career.

Gender Differences in Career Choices

In addition to general factors which influence career choice, other variables, such as gender and financial rewards, may be important to explore when examining career decision for dietitians. Thus far the three major studies discussed have explored career issues from the perspective of dietetics students. There exists the possibility that similarities in findings between these studies may have related more to gender tendencies rather than career issues. Career research conducted by Wilson on the “gifted” high school student revealed some findings which were gender specific. Wilson reported that “job satisfaction” was the “most important factor in career selection for both sexes. . .” However, “opportunity for creativity and challenges” was the second most important factor for females, while their male counterparts selected “salary” (Wilson, 1982). Another study involving 11th grade students found that men were significantly more likely to mention money as a factor in their career decision than women. While women were found to be more likely to mention “helping others” and “personal achievements” (Block, Denker, Tittle, 1981).

Historically the field of dietetics has been predominately female. Even in the early 1990’s ADA’s own database information revealed less than 10% of dietitians were males. In her study Rodenstein (1990) reported the percentage of male dietetic students (4.8%) was too small to allow for statistical

comparisons. Markley and Huyck (1992) reported a similar percentage (5.7%) of male respondents, and did not address gender comparisons, perhaps for the same reasons as Rodenstein. In 1974, of those aspiring to be dietitians only two percent were males. Once again, because the number of males in the population was small, statistically valid comparisons between the two genders was not possible (Freshman Interested in Nursing and Allied Health Professions, 1977). For each of these studies the percentage of males in the sample population was indicative of the dietetic population as a whole.

Financial Rewards and Career Choices

In the studies discussed thus far, financial considerations did not appear to play a significant role in influencing career choice. However, a different view is held by some currently practicing in the field. For example, the 1984 Study Commission on Dietetics reported that highly qualified students may not consider dietetics because of low salaries, particularly racial minorities and male students, where the competition to attract such students is greater (Report of the 1984 Study commission on Dietetics, 1985). Little (1989) echoed similar sentiments when she stated that “the focus on salaries seems to be increasingly more important in the minds of young people as they select their careers. The cost of education and the modest salary of most allied health practitioners may result in a student choosing an alternative career path even though the alternative is personally less interesting to the student” (Little, 1989, p. 3). The changing social and economic environment has led to women pursuing more of the higher paying, traditionally male careers. The gifted female has many career options and no longer needs to confine herself to careers in health or the social sciences (Wilson, 1982).

The writer is unaware of research which has gathered information from the pool of potential students who considered dietetics but ultimately selected a career other than dietetics. Without this information it is difficult to determine if finances did indeed play a role in their career selection. However, one researcher explored factors which influenced 11th and 12th grade high school students not to pursue education as a career. His research revealed that the primary reason high students did not choose education as a career was the salary. Educational requirements and working conditions also served to deter students from becoming teachers (Lucas, 1985). Even when an individual feels compelled to remain in a health related field because of altruistic feelings there are higher paying areas of health science such as medicine and physical therapy.

Who Influences Students About Careers?

The attitudes of parents, teachers and friends may influence career selection either toward or away from a career. Rodenstein's (1990) research found that students did not identify one primary person as being a key resource for their decision making. However, the ranking by students of the following people indicated that these individuals played a role in their decision making process: teachers (38%), friend or peer (34%), parent (33%) and guidance counselor (26%) (Rodenstein, 1990). Markley and Huyck's (1992) research identified "a friend or relative other than a parent (31%), and a dietitian (30.3%)" as the two most frequently selected individuals who lead students to consider a dietetic career. Another person who students ranked as having influenced their career decision was a parent (7.6%).

Additionally, Markley and Huyck (1992) found that students who made

their career choice in high school were primarily influenced by parents, while students who made that decision later in life were primarily influenced by a college professor or advisor. In addition, students who became interested in dietetics during college were more likely to be influenced by a college professor than second-career students (Markley & Huyck, 1992).

Other research, though not specific to dietetics, may provide additional insight. Lucas surveyed high school students from three high schools in the state of Tennessee. Eleventh grade students selected friend, "other" (not defined), parent, and vocational teacher as the most influential person in their career decision making process. Interestingly for twelfth grade students, the primary influence was someone other than family, friends, or school personnel. Lucas (1985) reported that 55% of high school students career influence came from individuals with limited career knowledge.

Since career selection is a complex series of choices spanning many years, often a combination of media resources are used in the decision making process. Rodenstein (1990) stated that this may explain why one primary resource for career decision making did not emerge from her research. To obtain information on the most important career "influences" Rodenstein asked students to rank up to five of ten possible choices. The largest number of students (45%) selected the category of "book/magazine/brochure" as the resource they used in making their career decision. In addition, 37% of the dietetic students reported that working in the field of dietetics helped them make their career decision (Rodenstein, 1990).

In their attempt to obtain similar career information, Markley and Huyck (1992) asked students "who or what led you to consider a career in dietetics?" Respondents were asked to "check all that applied" from a list of 20 options. A

course in nutrition was the most frequently selected factor which led students to consider a dietetics career. Other top responses included dietitian, and a relative other than a parent. The fourth most frequently selected factor was “newspapers/magazine articles” (books were not included). It should be noted that Rodenstein’s questionnaire did not include Markely and Huyck’s top three responses as possible selections. Markley and Huyck (1992) note that less than 10% of the students selected the category of “pamphlets”. The authors state that this may be “important feedback because many schools and organizations rely on brochures and pamphlets for recruiting students” (Markley & Huyck, 1992, p. 936).

Chapter 3

METHODOLOGY

Survey Instrument Design

The survey instrument developed for this study was an eight-item single page (front and back) questionnaire (Appendices 4 & 5). The questionnaire was developed so that a maximum amount of objective information could be obtained in a short period of time. The questionnaire was pilot tested with 12 undergraduate students in a dietetics class at Rochester Institute of Technology (RIT). All respondents completed the survey instrument in less than 10 minutes. Since the questionnaire was to be administered during a class period or on a student's own time, brevity was thought to be a key factor to obtain a sufficient sample size.

Question 1 asked students if there was one point in their life when they made their career decision. Only a simple "yes" or "no" response was requested to encourage students to complete the survey tool. Question 2 asked respondents to indicate at what point in their life they made their career decision. Students selected and checked the most appropriate response, from seven brief listings. For Questions 3, 4, and 5 (Appendix 4 & 5), students were asked to rate the various influence certain factors, people, and media sources had on their career choice. For each of these questions students were asked to numerically rate their responses. Each question and its components had a Likert rating scale of 1-5. Students were asked to circle their response. Number 1 represented a negative, (or "not important", "low influence", "not useful") response. On the other end of the scale, a number 5 was indicative of a positive (as "very important", "high influence", "very useful") response. A

numerical rating scale was used for two reasons. First, it allowed students to quickly and easily respond to questions with several sub-parts; and second, the scale allowed for easy computer coding, which was necessary since the sample size was large.

Question 6 was an open-ended question which asked students if there was anything they wanted to know more about when they were investigating career options. The purpose of this question was to provide students with the opportunity to respond without the constraints of preselected "answers". Question 7 asked student to indicate their two major interest areas in dietetics. The last question on the survey, number 8, contained demographic information. This question was placed last so it would not distract the respondent from answering the more subjective questions.

Sample Selection

The survey population consisted of colleges and universities throughout the United States which offered nutrition/dietetic Plan IV/V programs. The American Dietetic Association's 1990-1991 "Directory of Dietetic Programs" was used to select the sample population to be surveyed. In an effort to generate the most information and use resources economically, programs which contained small numbers were eliminated at the onset. All programs which reported greater than five 1989-90 graduates were selected for the sample population. Out of 252 nationwide programs, survey information was mailed to 156 programs. Anticipating a possible moderate return rate, a large survey sample was mailed to generate a sufficient data pool, which would reflect any regional differences and provide a sufficient sample size within each of the 7 demographic areas the ADA uses to divide the United States.

Survey Administration

The initial sampling consisted of a questionnaires and a pre-addressed envelope which was mailed to directors of preselected Plan IV/V sample schools. Each packet of questionnaires contained a cover letter which briefly explained the purpose of the study (Appendix 1). The number of questionnaires each school received was determined by the number of graduating seniors reported for the previous year. Since the questionnaire was initially planned to be administered to freshmen only, the assumption was made that the incoming freshmen class would be approximately equal to the number of the graduating senior class. A "pad factor" of five to ten questionnaires was included to allow for small discrepancies. For convenience, pre-addressed return envelopes were included with the mailing. Each school assumed responsibility for the return postage. All schools were asked to have the students complete the questionnaire, and return them within the time frame provided.

The cost was the primary factor for not using postage paid return envelopes. It was assumed that prepaid postage would not have a significant effect on the return rate since the school, not the individual, would be responsible for the return postage cost.

Since the response rate for the first sampling was too low to provide enough data for comparison, a second sampling was required. A follow-up mailing was sent to all schools that did not respond to the first mailing (Appendix 2). A sufficient sample size was obtained when the first and second mailing were totaled.

The first mailing of the April 1991 questionnaire was targeted to freshman dietetics students. However, adjustments were made when feedback from dietetic program directors revealed that many students did not declare a major

until later in their college career. Phone contacts were attempted with each school participating in the survey to request that they administer the questionnaire to all dietetic students. Additional written instructions requesting that the survey be administered to all dietetic students were included with all questionnaires distributed in the second mailing (Appendix 3). Although freshmen may have been over represented in the first mailing, the return rate was so low that its impact on the overall study was minimal.

Data Analysis

Data were analyzed using the Statistical Package for the Social Sciences (SPSS). Frequencies for all variables were examined to identify outliers and missing data. Few outliers were noted in the data, and the percentage of missing data was on the average no higher than 4%. Percentages of subjects who answered each response were calculated, and measures of central tendency were examined, for factors which influence career choice (Question 3) and persons who influenced career choice (Question 4).

Chi Square analysis was used to examine relationships between point of decision and factors which influenced career choice, and person who influenced career choice. Although the ordinal scales used in Questions 3 and 4 could have been treated as interval, and thus used in regression or analysis of variance frameworks a more conservative approach was used by employing Chi Square analysis. In addition, the use of Chi Square analysis would enable the findings of this research to be compared to findings of similar studies.

Chapter 4

RESULTS AND DISCUSSION

Introduction to Results

This chapter begins with a report of the sample characteristics and descriptive findings of this study. Research questions are answered separately to provide for clarity. Other relative findings, including Chi Square analyses, are then stated.

Sample Characteristics

Of the substantial number of questionnaires distributed to Plan IV/V directors of approved dietetic programs, 1,695 completed questionnaires were returned. The first mailing, which was anticipated to generate a sufficient sample size, was distributed April, 1991. Many schools, particularly those out of state, found it difficult to administer the questionnaires during the spring semester. Proximity to final exams was the main reason given for failure of Plan IV/V directors to administer the first wave of questionnaires. Of the 1,695 questionnaires returned, only 218 or 12.9% were received from the initial April 1991 mailing.

In October of 1991 a subsequent mailing was undertaken to increase the sample size. The second mailing generated 1,475 questionnaires or 87.0% of the 1,695 total questionnaires received. Of the 156 colleges and universities contacted, information was received from 84 schools. One program, in which no information was received, reported phasing out its Plan IV program. The number of questionnaires returned varied greatly between schools.

Of the seven demographic Areas, 5 and 7 had the highest number of

questionnaires returned. Area 5 had 372 questionnaires returned, Area 7 had 373 questionnaires. Information was received from 36 of the 48 states surveyed and the territory of Puerto Rico. The largest number of responses, 164 questionnaires came from New York State. Of the 156 schools which were mailed questionnaires, responses were received from 53.9% of the schools. The mean number of questionnaires received per school was 20. The largest number of questionnaires, 72, were received from a school in the Northeast. Demographic information revealed that 89.4% of respondents were female, and 10.6% were male. Ninety percent of the students indicated they were white. The remaining 9.9% of respondents were from various minority groups. The majority, 53.0%, of respondents were between the ages of 20-22 years old. Another 14.3% of the respondents were between 23-25 years old; 10.4% of the group was 26-30 years old. Respondents who were 31 years or older, comprised 13.1% of the sample, while those 17-19 years old represented 9.1% of the population. When respondents were asked which area they considered home the majority, 47.0%, indicated a suburban community. Responses were equally divided on the number who selected a rural area, 26.8%, versus the city, 26.2%, as their home.

Descriptive Findings

In Question 1, 93.6% of respondents reported that there was "one point" in their life when they decided "to pursue a career in dietetics". When respondents were asked in Question 2, to identify when their career decision was made, the number one choice selected by 57.6% of respondents was "college". Another 16.9% indicated that their career decision was made during the 11th or 12th grade of high school. Students who made their career decision

prior to 11th grade, compose 6.3% of the group. Respondents who made their career decision “after exposure through work experience,” comprised 10.5% of the population. The remaining 8.2% of respondents selected the category of “other.”

In Question 3, respondents were asked to rate different factors which may have influenced their career choice. With respect to opportunity for advancement, 47.8% selected a value of 4 or 5, indicating that this factor was “quite” or “very important” to them. When respondents rated how important “positive comments about dietetics” was in helping them “decide to become a dietitian”, 60.3% selected a value of 4 or 5, indicating that this factor was “quite” or “very important”. Results were well distributed when respondents were asked to rate the degree of influence financial rewards played in making their career decision. A value of 1 or 2 was selected by 28.3% of respondents, indicating that financial rewards were minimally important. Approximately one third, 36.1%, selected the neutral value of 3. A value of 4 or 5 was selected by 35.6% of respondents, which indicated that financial rewards were “quite” or “very important” to their career selection. Respondents rated “part-time work opportunities” in a similar pattern as financial rewards. Values of 1 or 2 were selected by 33.7% of respondents, indicating that part-time employment was minimally important. Twenty-four percent selected the neutral value of 3. Another 42.3% of respondents indicated that part-time work opportunities was “quite important” or “very important” by assigning it a value 4 or 5. With respect to diversity of work environment almost three quarters, 73.4%, of respondents indicated this factor was “quite important” or “very important” by selecting a value of 4 or 5.

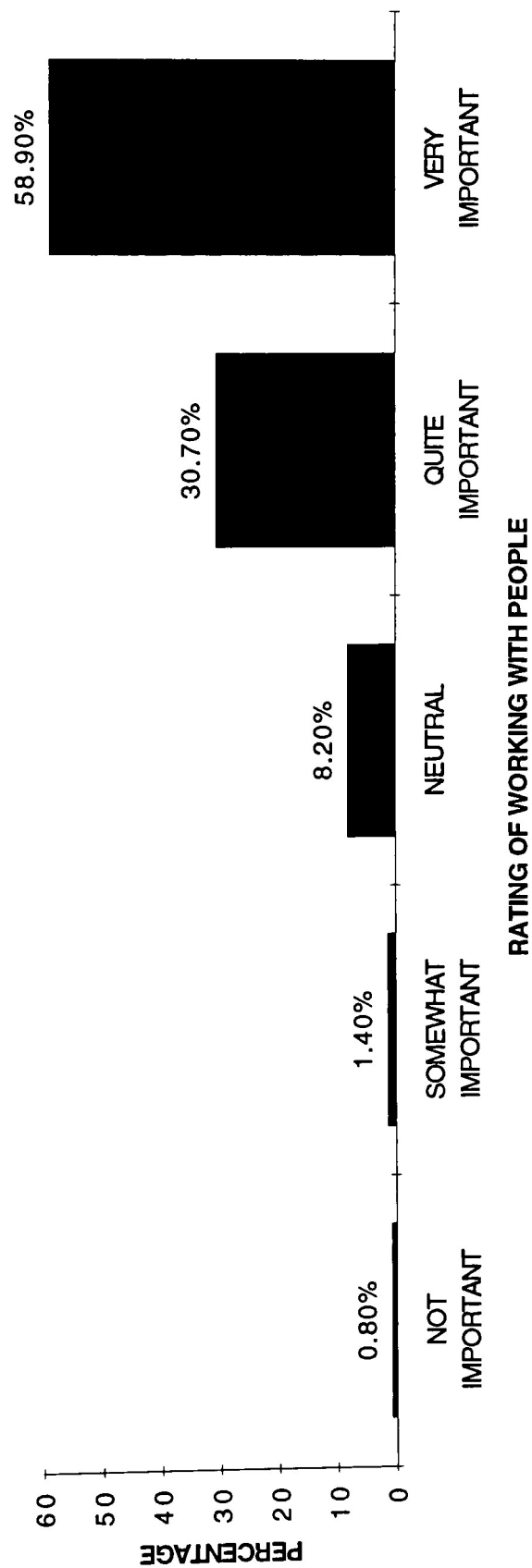
The two factors which were rated highest with respect to influencing

respondents favorably toward pursuing dietetics were “interest in nutrition” and “job enjoyment”. A value of 5, was selected by 82.7% of respondents, indicating that interest in nutrition was “very important” when deciding to become a dietitian. Another 15.2% selected the value of 4, indicating that interest in nutrition was “quite important” to their career decision. When asked about “job enjoyment”, 74.4% of respondents indicated that it was “very important” by assigning a value of 5 to the factor. Another 21.2% of respondents indicated that “job enjoyment” was “quite important” by selecting a value of 4.

“Opportunities to help others” was also rated as being important to respondents when making career choices. Values of 4 or 5 were selected by 90.1% of respondents, indicating that “helping others” was “quite” or “very important” to their decision to pursue dietetics. Respondents were also asked to rate the influence “working with people” had on their career selection. As seen in Figure 1, 89.6% indicated this factor was “quite” or “very important” by assigning it a value of 4 or 5.

Question 4 sought to determine the degree of influence people might exert on a person’s career choice. Over 75% of the respondents rated the following people as having either “low” (value 1), “some” (value 2), or “neutral” (value 3) influence on their career decision: grandparent (92.6%), sibling (86.5%), relative - other than parent or sibling (85.8%), guidance counselor (83.9%), father (77.1%). When asked about the influence of an employer, 70.4% of respondents indicated that they had “low” or “some” influence by selecting the values of 1 and 2 respectively. Another 10.6% indicated a neutral influence by assigning the value of 3 to the question. Values of 4 or 5 was selected by 18.9% of respondents, indicating that an employer had a “moderate” or “high” influence on their career decision.

FIGURE 1
INFLUENCE OF WORKING WITH PEOPLE ON CAREER CHOICE



Of the individuals listed, respondents selected mother, friends, and teachers as having had the most positive influence on their career choice. When rating the influence their mother had on their career, 36.2% of respondents selected a value of 4 or 5, which indicated a "moderate" or "high" influence. However the majority of respondents, 46.3% indicated that their mother had "low" or "some" influence by selecting a value of 1 or 2. As a category, teachers were found to exert a "moderate" (value 4) or "high" influence (value 5) on career decision by 34.4% of respondents. An additional 23.1% of respondents indicated that friends had a "moderate" or "high" influence on their career selection by choosing a value of 4 or 5 on the rating scale.

Question 5 sought to determine how useful various informational sources were in helping the respondents make their career choice. Over 50% of the respondents indicated that the following three categories of informational sources were "not used" in their decision making: computer based career search, career video/films/film strips, literature from the high school guidance office. It is not apparent whether these informational sources were unavailable, thus students were unable to use them, or the information was available and the student (for whatever reason) selected not to use the resource.

Of the 1695 questionnaires received, approximately 650 respondents reported that literature from the American Dietetic Association was not used when making their career choice. Of those respondents who used the Association's materials, 36.7% indicated that the resources were "moderately useful" or "very useful" by selecting a value of 4 or 5. Twenty-seven percent of respondents selected a value of 3 indicating the material was of neutral value. A value of 1 or 2 was selected by 36.2% of respondents, which indicated that material from the Association was "not useful" or only "somewhat useful". From

the informational sources listed on the survey instrument, university/college catalogs were selected by respondents as being the “most useful,” in assisting with their career decision. College catalogs were rated as being either “moderate” (value 4) or “very useful” (value 5) by 55.3% of the students.

Several speciality areas exist in the field of dietetics. To help determine students’ areas of interest, Question 7 asked respondents to select two areas from a list of eight possibilities. The three most prevalent areas of interest were: consultation/private practice (20.7%), clinical nutrition (18.9%), and health promotion/wellness (17.0%).

Point of Decision and Factors Influencing Career Choice

Chi Square analysis was used to examine the relationships among the variables. First, a series of Chi Square analyses were done to determine the relationships between the point of career decision and factors influencing career choice. Students selected from one of seven possible responses to indicate the particular point in their life when their career decision was made. The first selection, “as far back as I can remember”, had a response rate of 0.7%. The second selection “junior high school (7th and 8th grade)” had a response rate of 1.5%. The third response, “9th or 10th grade,” was selected by 3.8% of respondents. Since the response rate for each of the first three selection was very low, these responses were collapsed into one unit, which thus reflected point of decision at tenth grade or earlier. When answering Question 2, 8.1% of respondents selected the last category option of “other”. The category of “other” was omitted for the Chi Square analysis. For Tables 1-6 n varied due to a small amount of missing data.

After point of decision was collapsed, analyses were done which examined the relationship between point of decision and factors influencing decision (Table 1). Students who had exposure to the field of dietetics through work exposure were more likely ($X^2=26.24$, df 12, $P<.01$) to rate opportunities for advancement as very important. These same students were also more likely ($X^2=28.65$, df 12, $P<.01$) to rate part-time work opportunities as very important. No other significant relationships between point of decision and factors influencing career choice were demonstrated.

Those students who attended school in Area 7 (Northeast) were more likely ($X^2=33.95$, df 18, $P=.01$) than students in other parts of the country to make their career decision after exposure through work experience (Appendix 6). There were no other significant findings when geographic areas were compared with factors listed in Question 3 (Table 2).

Point of Decision and Persons Influencing Career Choice

Chi Square analysis was also used to examine point of decision and individuals who influence decision (Table 3). Students who made their career decision in college were less likely than those who made decisions at other times ($X^2=78.67$, df 12, $P<.001$) to report that a teacher had low influence on their career decision. The data revealed that 58.4% of students rated guidance counselors as having had a low influence on their career decision. Students who made their career decision after exposure to work experience were less likely than expected ($X^2=30.44$, df 12, $P<.01$) to indicate that a guidance counselor had influenced their choice.

An employer had a low degree of influence on career choice for 59.9% of the students. However, students who made their career decision after exposure

Table 1

Relationship Between Point of Decision and
Factors which Influence Career Choice $n = 1,695$

Factors Influencing Career Choice	χ^2
Opportunity for advancement	26.25**
Positive comment about dietetics	22.59
Financial reward	18.42
Diverse work environment	17.14
Part-time work opportunities	28.65**
Opportunities to help others	14.14
A job that you enjoy	12.10
Working with people	20.82
Interest in nutrition	14.65

Note. ** $p < .01$. Categories for point of decision were: 10th grade or earlier, 11th or 12th grade, college, and after exposure through work experience. Degrees of freedom for all analyses were 12.

Table 2

Relationship Between Geographic Areas and
Factors which Influence Career Choice $n = 1,695$

Factors Influencing Career Choice	χ^2
Opportunity for advancement	22.43
Positive comment about dietetics	32.48
Financial reward	23.96
Diverse work environment	34.66
Part-time work opportunities	22.85
Opportunities to help others	28.60
A job that you enjoy	37.32
Working with people	20.19
Interest in nutrition	30.29

Note. None of the Chi Square analyses were significant. Degrees of freedom for all comparisons were 24. See Appendix 6 for categories of geographic areas.

Table 3

Relationship Between Point of Decision and
People who Influence Career Choice $n = 1,695$

People Influencing Career Choice	χ^2
Teacher	78.67***
Grandparent	18.43
Friends	20.63
Mother	58.37***
Father	58.31***
Sibling	26.82**
Other Relative	23.12
Guidance Counselor	30.44**
An Employer	86.27***

Note. ** $p < .01$; *** $p < .001$. Categories for point of decision were: 10th grade or earlier, 11th or 12th grade, college, and after exposure through work experience. Degrees of freedom for all analyses were 12.

to work experience were more likely than expected ($X^2=86.27$, df 12, $P<.001$) to indicate that an employer had a high degree of influence on their career decision. Students who made their career decision after exposure to work experience were more likely than expected to rate their parent as having a low influence on their decision (mother, $X^2=58.37$, df 12, $P<.001$; father $X^2=58.31$, df 12, $P<.001$).

Chi Square analysis indicated that 58.6% of students rated their sibling as having had a low influence on their choice. Students who made their career decision in college were even less likely than expected ($X^2=26.82$, df 12, $P<.01$) to indicate that a sibling has had some influence on their choice. No other significant relationships between point of decision and factors influencing career choice were demonstrated.

Chi Square analysis was performed to test for ethnic and/or gender differences in factors which influence career choice (Table 4 & 5). Men rated diverse work environment as being very important to their career decision less frequently than expected, while women rated diverse work environment as being very important to their career decision more frequently than expected ($X^2=15.44$, df 4, $P<.01$).

Chi Square analysis demonstrated that women were more likely than expected ($X^2=26.75$, df 4, $P<.001$) to select part-time work opportunities as being very important in their career decision, while men were less likely than expected ($X^2=26.75$, df 4, $P<.001$) to select part-time work opportunities as being very important to their career decision. Women were also more likely than expected ($X^2=17.59$, df 4, $P<.01$) to select working with people as being very important in their career decision, while men were less likely than expected

Table 4

Relationship Between Ethnic Origin and
Factors which Influence Career Choice $n= 1,695$

Factors Influencing Career Choice	χ^2
Opportunity for advancement	4.67
Positive comment about dietetics	1.25
Diverse work environment	3.62
Part-time work opportunities	2.50
Opportunities to help others	6.41
A job that you enjoy	3.11
Working with people	2.81
Interest in nutrition	4.68

Note. None of the Chi Square analyses were significant. Degrees of freedom for all comparisons were 4. The analysis included Caucasians and Afro Americans only.

Table 5

Relationship Between Gender and
Factors which Influence Career Choice $n= 1,695$

Factors Influencing Career Choice	χ^2
Opportunity for advancement	2.02
Positive comment about dietetics	3.31
Financial reward	7.79
Diverse work environment	15.44**
Part-time work opportunities	26.75***
Opportunities to help others	9.95
A job that you enjoy	14.10**
Working with people	17.59**
Interest in nutrition	6.61

Note. ** $p < .01$; *** $p < .001$. Degrees of freedom for all comparisons were 4.

($X^2=17.59$, df 4, $P<.01$) to select working with people as very important to their career decision. No other significant relationship between factors which influenced career choice and gender were demonstrated. In addition, no significant relationship was found when Chi Square analysis was used to compare Caucasian and Afro-American students and the influence of factors listed in Question 3. When Chi Square analysis was performed to test for ethnic and gender differences and point of career decision, no significant relationships were found (Table 6).

Introduction to Discussion

The second part of the chapter discusses the findings of this study, particularly in the areas of career decision point, factors influencing career decision, the impact of financial rewards on career, and persons who influence career choice. Implications of the findings for recruitment into the field of dietetics are proposed. In addition, the findings are compared with the two leading bodies of research in this field, that of Rodenstein, Markley and Huyck.

Demographics

As would be expected, the demographic sample of dietetic students in this research was reflective of 1991 national ADA database information on members. ADA reported that 91.1% of its members when asked about race/ethnic origin indicated they were white. Another 4.6% indicated they were Asian or Pacific Islanders, only 2.6% were black, and another 1.5% Hispanic. Demographic information from this research, as depicted in Figure 2, also revealed that the overwhelming majority of students were white.

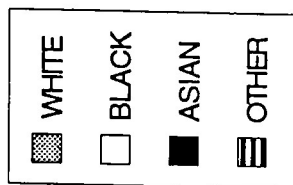
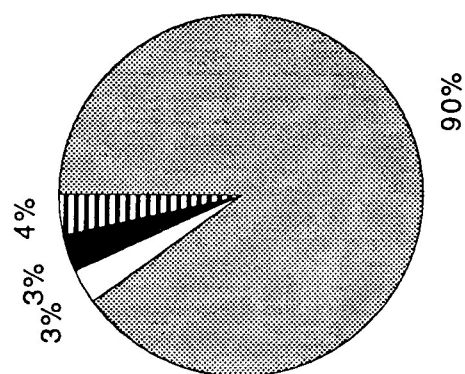
Table 6

Relationship Between Point of Decision and
Selected Demographic Variables $n = 1,695$

Geographic Variables	χ^2
Ethnic Origin (white/black)	8.38
Gender	7.20
Geographic Areas	33.95*

Note. * $p = .01$. Categories for point of decision were: 10th grade or earlier, 11th or 12th grade, college, and after exposure through work experience. Degrees of freedom for ethnic were three, for gender 3, and for geographic areas 18. See Appendix 6 for categories of geographic areas.

FIGURE 2
ETHNIC DISTRIBUTION



The composition of non-white groups was also reflective of ADA's database information.

Historically dietetics has been a female dominated profession. ADA's own information revealed that in 1991, 97.7% of its members were women. Interestingly, this research found that while the overwhelming majority of dietetics students were still female, 10.6% were males, as seen in Figure 3. The discrepancy between this research and the ADA membership database may indicate that more males are pursuing dietetics as a viable career choice. Perhaps the increase in non-traditional job opportunities has attracted more men into the profession of dietetics. If indeed more men are pursuing this career it would be expected that future ADA database information would reflect this trend.

However there exists the possibility that the number of male dietetic students who chose later to change majors is disproportionately higher than female dietetic students. This could explain why this researcher found a higher percentage of males among the student population.

Career Decision Point

When data obtained from this research was compared with information from Markley and Huyck's survey of dietetic students, similarities were noted. As seen in Figure 4, this research revealed that the majority of students, 57.6%, made their decision to become a dietitian during college. Markley and Huyck reported that, 43.9%, of the approximately 400 students they surveyed "first became interested in a dietetic career while in college." The 10.6% difference between the two studies may have been attributed to the slightly different response options offered by each questionnaire. Markley and Huyck's

FIGURE 3
PERCENT FEMALE VS. MALE RESPONDENTS

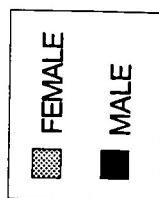
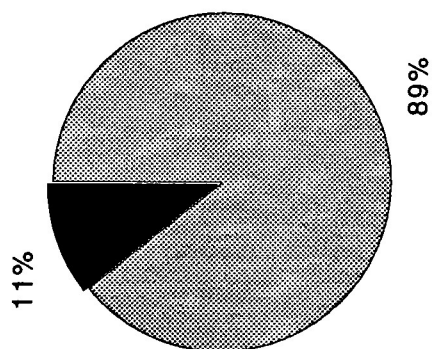
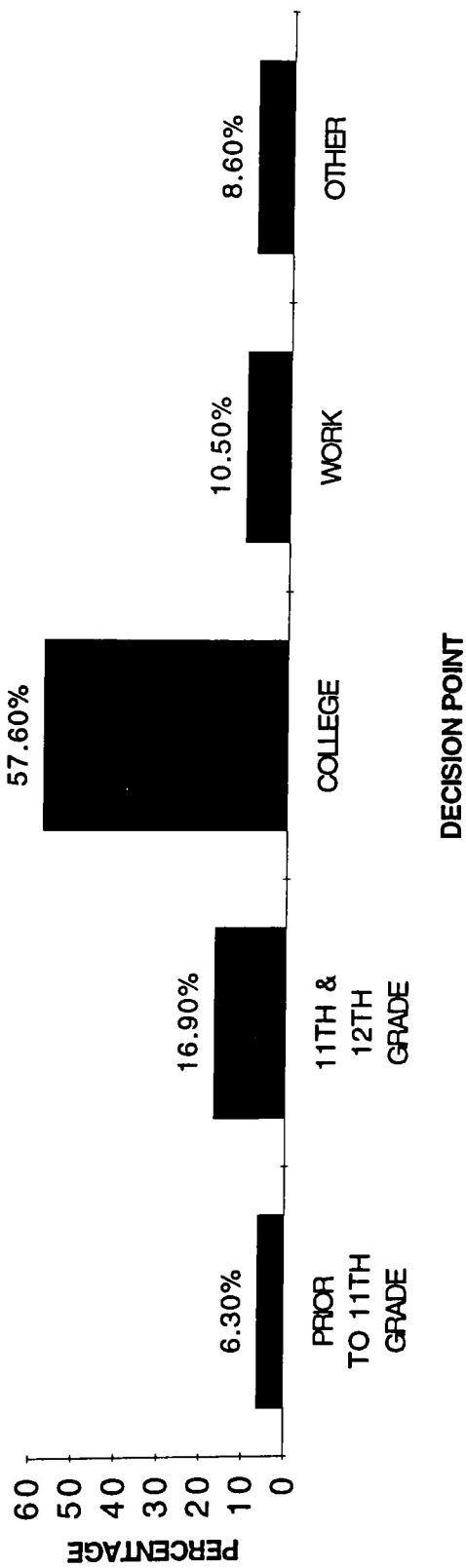


FIGURE 4
CAREER DECISION POINT



questionnaire included the category of “after high school but before college” in their response selection. When students in Markley and Huyck’s study were asked at what point they first became interested in dietetics as a career option, 13.4% indicated the decision was made after high school but prior to college. The category of “after high school but before college” was not included as a response choice for this author’s research. Students who may have otherwise selected this option, were forced to choose the next best alternative which may account for the differences between the two studies.

Markley and Huyck’s (1992) research revealed that the second largest group of students, 22.0%, first became interested in dietetics as a career option during secondary school, grades 7th through 12th. Similarly, this research found that 21.3% of dietetic students had made their career decision during the 7th through 12th grades, with 16% doing so in their 3rd or 4th year of high school. Ten percent of the students surveyed indicated that their career decision was made after “exposure through work experience.” These students were most likely older non-traditional students, such as second career students. Another 8.2% of respondents selected “other” when asked at what point they made their decision. Additionally, some second career students, as well as other non-traditional students, may have selected the category of “other”. The fact that 12.8% of the students surveyed were over 31 years old suggests that their career decision may have been made at a point beyond college. Markley and Huyck (1992) reported that of the students they surveyed, 17.7% first became interested in dietetics as a career option “after leaving college (career change).” Once again, despite somewhat different response options, this author’s research showed similar findings to Markley and Huyck’s.

Factors Influencing Career Decision

In this research, students were asked to rate several characteristics which may have influenced their decision to pursue dietetics. Opportunities to help others, as seen in Figure 5, were rated as being important to students when making their career choice. A value of 4 or 5 was selected by 90.1% of respondents, which indicated that “helping others” was “quite” or “very important” to their decision to pursue dietetics. In Markley and Huyck’s research “characteristics of the profession” were rated as “having a positive, neutral, or negative influence” on career choice (Markley & Huyck, 1992, p. 935). According to the authors “an opportunity to help others” was rated by over 95% of their students as having positively influenced their decision to pursue dietetics (Markley & Huyck, 1992). In each study, the desire to “help others” was found to be a strong influencing factor in students selecting dietetics as a career choice. This research, as well as Markley and Huyck’s, demonstrated the altruistic nature of dietetic students.

This author’s research revealed that a personal “interest in nutrition” was the strongest influencing factor in a student’s decision to study dietetics. As seen in Figure 6, 82.7% of respondents selected a value of 5, which indicated that interest in nutrition was “very important” in their decision to become a dietitian. Another 15.2% selected the value of 4, indicating that interest in nutrition was “quite important” to their career decision. Markley and Huyck’s research also demonstrated that the “relationship of nutrition to health” was a strong influencing factor in students pursuing dietetics as a career.

FIGURE 5
INFLUENCE OF DESIRE TO HELP OTHERS ON CAREER CHOICE

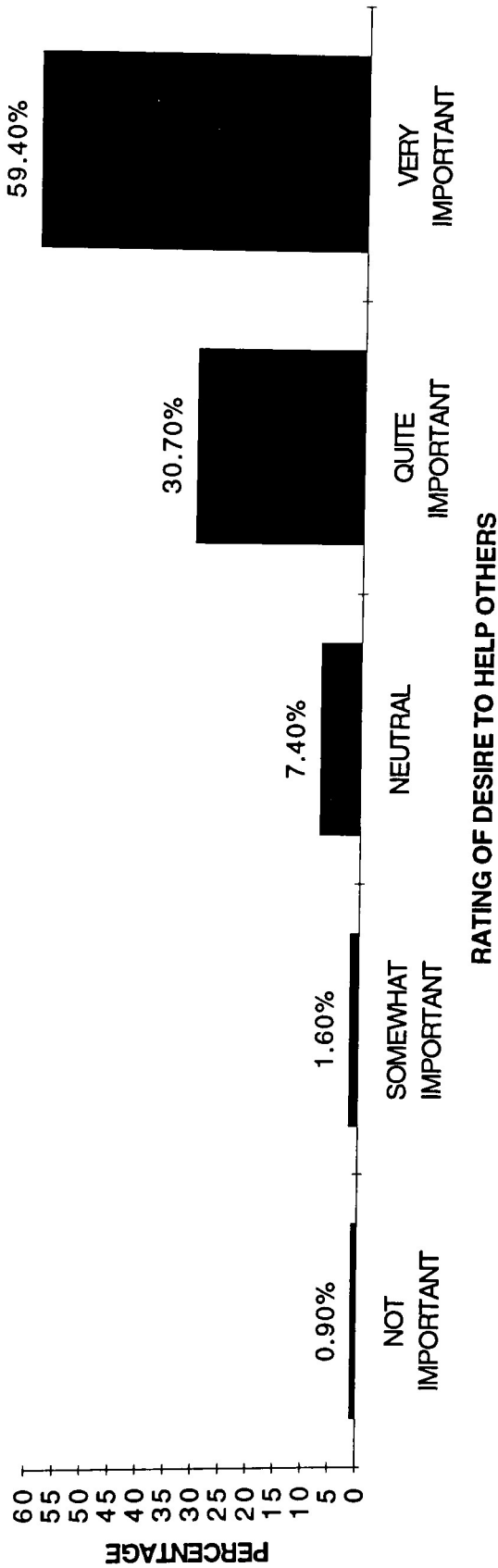
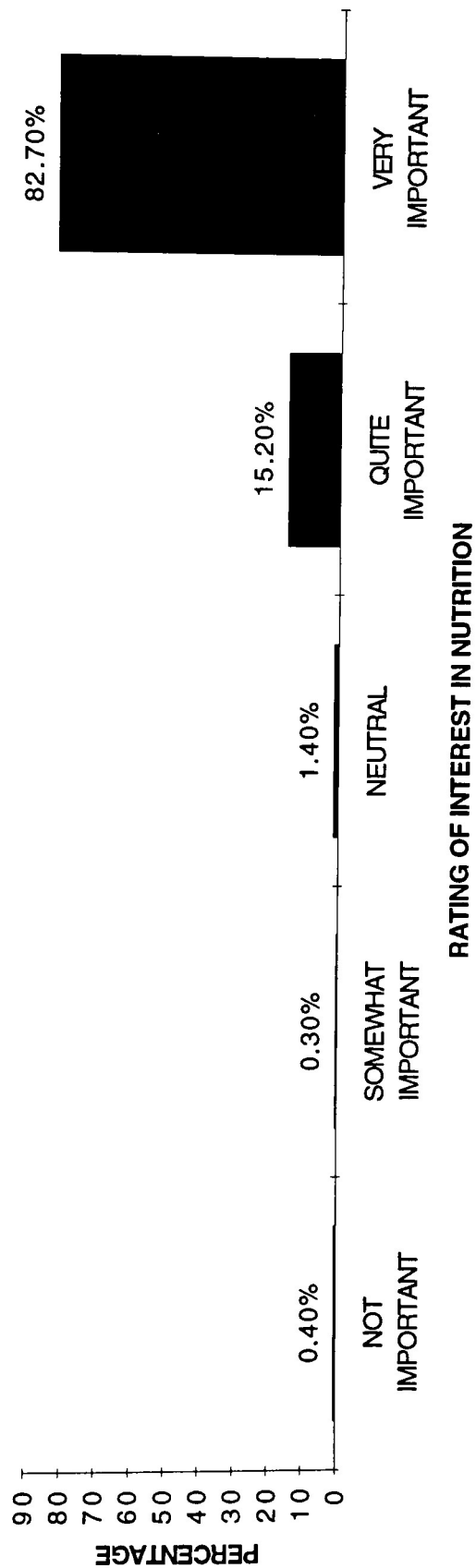


FIGURE 6
INFLUENCE OF INTEREST IN NUTRITION ON CAREER CHOICE

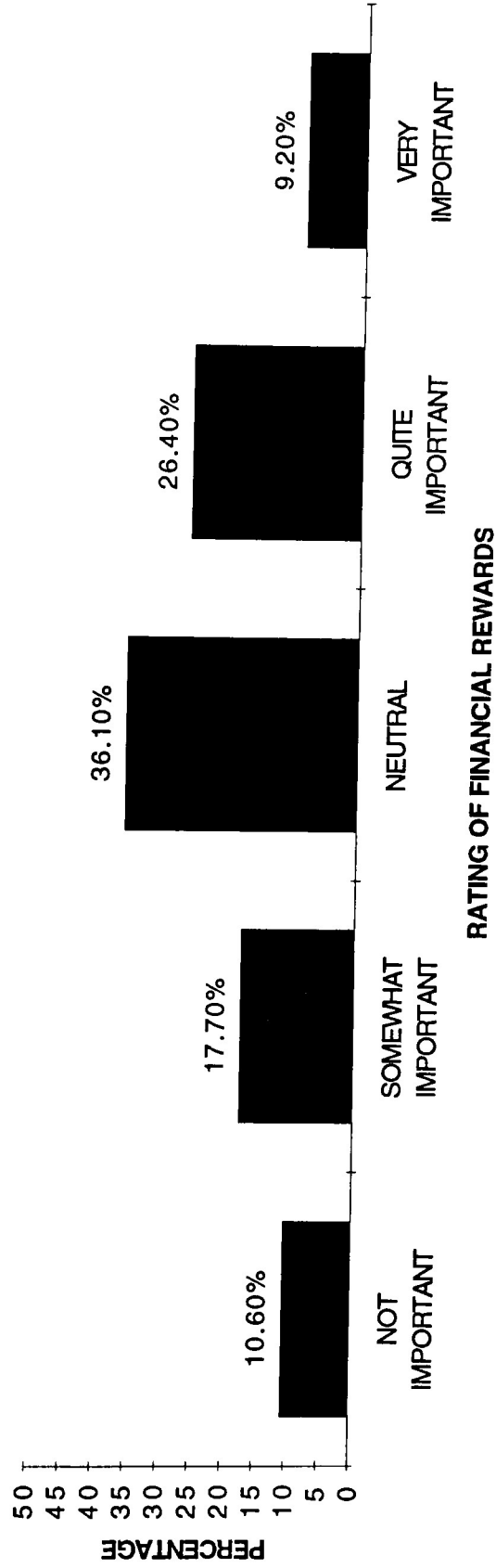


Financial Impact

This author was particularly interested in examining the impact financial rewards has on career choice. As seen in Figure 7, results were well distributed when respondents were asked to rate the degree of influence financial rewards had on their career decision. Values of 1 or 2 were selected by 28.3% of respondents, indicating that financial rewards were of minimal importance. Another 36.1% of the students selected the neutral value of 3. A value of 4 or 5, was selected by 35.6% of respondents, indicating that financial rewards were “quite” or “very important” to their career selection. These results suggests that financial rewards were not an important factor for the majority of students who decided to pursue a career in dietetics. Initially these findings seemed to be somewhat of a surprise. There are, however, several plausible explanations as for to why financial rewards appeared relatively unimportant to students pursuing dietetics. This research, as well as other studies (Rodenstein, 1990; Markley & Huyck, 1992) likely reflects the often altruistic nature of students who pursue dietetics. These students may be aware that dietetics has traditionally not been a high paying job, but they may place a priority on being in a helping profession that personally interests them.

There also exists the possibility that some bright and talented potential students who explored the field of dietetics, selected another career alternative. Their decision may have been based on a multitude of factors, including the relatively low salary that many dietitians receive, compared to other professionals with similar educational requirements. Students who are interested in helping others, and also concerned about monetary

FIGURE 7
INFLUENCE OF FINANCIAL REWARDS ON CAREER CHOICE



compensation, may have opted for higher paying jobs in the health care industry, such as physical therapy.

Many students, with the exception of some non-traditional students, rely on their parents at least in part for financial support. Students who are not financially self sufficient may view financial rewards as being less important than someone who has been financially independent. It is this researcher's sense, that financial compensation becomes more of an issue with retention rather than recruitment since those working have experienced the relationship between quality of life and financial rewards.

The issue of monetary compensation may also provide one plausible explanation for the limited number of male dietitians. Historically, men have been referred as the "bread winners", the financial providers for the family unit. Considering the traditional societal role of men, male students may place a higher value on salary considerations when compared to their female counterparts. In this research, when Chi Square analysis was performed there was no significant relationship between gender and financial rewards. This does not necessarily contradict the above premise. If men as group, are more salary conscientious than women, then it would stand to reason that those men who pursue dietetics may be the exception to the rule.

As might be expected, Chi Square analysis showed women were more likely than expected to select part-time work opportunities as being very important to their career decision. The opposite was found to be true with men. It is realistic to assume that the importance placed by women on part-time work opportunities is related to their traditional child rearing roles. Despite some mergence of roles, it appears that both genders anticipate that the female will make any work schedule adjustments in her career.

Chi Square analysis also showed women rated diverse work environments as being very important to their career decision more frequently than expected. Conversely, men rated diverse work environment as being very important to their career decision less frequently as expected. This may reflect a greater desire on the part of women for flexibility in the work environment.

Chi Square analysis revealed that students who had exposure to the field of dietetics through work experience were more likely to rate opportunities for advancement and part-time work opportunities as very important. Often non-traditional students have had more work related experience than the traditional student. It is reasonable to assume that students with work experience may be more aware of the benefits of career advancement. Skill development may lead to a promotion and salary increase. This finding also supports the notion that while financial rewards may be important to recruitment, it is even more important in retention.

Since the majority of dietitians are women, the older, non-traditional student may have been considering child rearing when they rated part-time work opportunities as very important. Despite the trend toward more families with two full-time incomes, women appear to remain the primary care-givers.

People Influencing Careers

The categories of mother, friends, and teachers were found to have the most influence on career choice. However, the majority of respondents still indicated that these people had a neutral or limited influence on their career decision. In this research, no one clear person emerged as having had a significantly high influence on a student's career choice.

Chi Square analysis revealed that students who made their career

decision in college were less likely than expected to report that a teacher had a “low influence” on their career decision. In this research, the term teacher was not defined. When college students evaluated the influence of “teacher” on their career choice it appeared they used the term synonymous with college professor/instructor. If this assumption is correct, it would seem reasonable that Chi Square analysis would demonstrate that a teacher (college professor) was more likely than expected to have influenced their decision.

Media Sources

Unlike Markley and Huyck’s research tool, this researcher used separate questions to evaluate the influence people and media sources had on career decision. As seen in Figure 8, over 50% of students indicated that college catalogs were useful in their career decision making process. Interestingly, this figure very closely reflects the number of students who reported making their career decision in college. College students may be using their school’s college catalog to assist them with their career decision because students are unaware of other resources or these resources are not readily accessible.

This research also revealed that over 50% of the respondents indicated that the following three categories of informational sources were “not used”: computer based career search, career video/films/film strips, and literature from the high school guidance office. It is not apparent whether these informational sources were unavailable, thus students were unable to use them, or the information was available and the student (for whatever reason) selected not to use the resource.

Another 39.1% of the students, as seen in Figure 9, reported that literature from the ADA was not used when making their career choice. Of those

FIGURE 8
PERCEIVED VALUE OF COLLEGE CATALOG

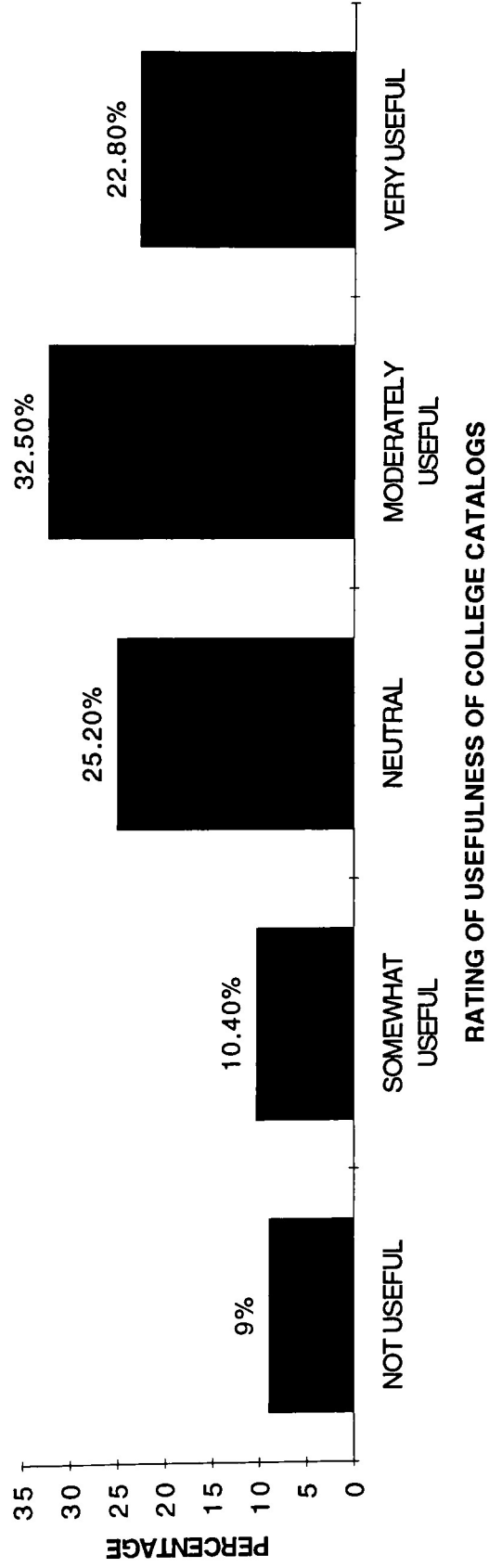
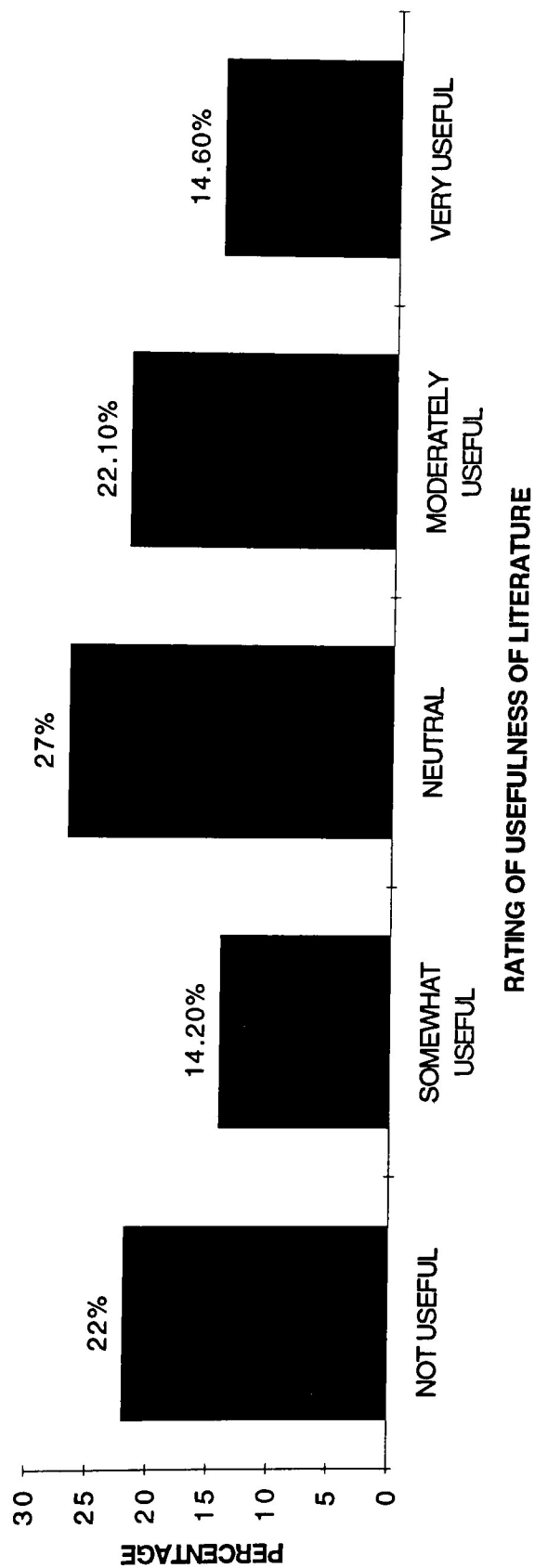


FIGURE 9
PERCEIVED VALUE OF AMERICAN DIETETIC ASSOCIATION LITERATURE



respondents who did use the Association's material, 36.2%, indicated that the material was limited in its usefulness. This research demonstrated that most printed materials did not significantly influence the decision-making process of students pursuing dietetics.

In the area of media resources, this author's findings appeared incongruent with Rodenstein's study. Rodenstein (1990) reported that printed media, specifically books, magazines, and brochures, were selected most frequently by students as influencing their career choice. However, Rodenstein (1990) clearly stated that her review of the literature demonstrated that the usefulness of printed material was dependent on the ability of the disseminator to personalize the information.

Additionally, the discrepancies between the two research studies may have related to the different research tools used. This author used independent questions to explore the influence people and information sources had on career decision. Rodenstein's questionnaire grouped people, media, and work experience as response options for one question, and then asked students to rank up to five of these "influences".

Results of Markley and Huyck's findings add further support for this argument. Similar to Rodenstein, Markley and Huyck intermingled both people and media sources (as well as other factors) as selections when they asked students to identify "who or what led you to consider a career in dietetics?" Markley and Huyck reported their top three responses to this question were a "course in nutrition, a dietitian, or a relative other than a parent". "Newspapers / magazines were the fourth most frequently" selected factor in their study. (Markley & Huyck, 1992, p. 936) Interestingly, Rodenstein's questionnaire did not contain Markley and Huyck's top three responses (Markley & Huyck, 1992).

This author's research may more accurately reflect the degree of influence media sources, including printed material, had on career decision making. In both Rodenstein's and Markley and Huyck's studies the degree of influence assigned to "printed materials" depended on other factors which were also being evaluated in the same question. For this study students may have more clearly focused, and thus more accurately identified the degree of influence media sources had, since a separate question was used to evaluate this information.

Areas of Practice

This research asked students to select two areas of dietetic practice from a list of eight possibilities. As represented in Appendix 5, the two primary areas of interest were: consultation/private practice and clinical nutrition. Markley and Huyck (1992) asked students to select one area of dietetic practice from the following five possibilities: community dietetics, clinical dietetics, consultation and private practice, management practice, and education and research. Markley and Huyck reported that "students were most interested in practicing dietetics as a consultant or in private practice (37.5%) or as a clinical dietitian (34.8%)" (Markley & Huyck, 1992, p. 933). Interestingly, in both this research and Markley and Huyck's study students selected the same two primary areas of interest.

Historically, students have selected "clinical dietetics" as the practice area they were most interested in pursuing after graduation. The results of both of these studies suggest that those in the profession are interested in more non-traditional career avenues. This could be key information and should be incorporated in any recruitment initiatives.

It was an unexpected finding when Chi Square analysis revealed that students who attended school in ADA's geographic Area 7 were more likely than other students to make their career decision after exposure through work experience. Area 7 comprises the Northeastern corner of the United States (Appendix 7). The possibility exists that the Northeastern section of the country has more employment opportunities than other parts of the country which may be less populated.

Chapter 6

CONCLUSION

Summary

This study found that the majority of the students reported making their career selection during college. Students rated "interest in nutrition" and "job enjoyment" as factors that highly influenced their decision to pursue dietetics. Other factors which were rated as having a positive impact on career choice included "opportunities to help others" and "working with people."

For the majority of students financial rewards did not appear to play a significant role in influencing their career choice. While this is consistent with other research, there may be several plausible explanations for this finding. Nonetheless, the altruistic nature of dietetics students seems apparent.

Interestingly, when students evaluated the influence of various people and media sources on their career decision, no primary source of influence emerged. Career choice appears to be influenced by a variety of sources. Potential students may be more open minded to recruitment activities than previously considered. This is an important finding, since in the past little has been done to recruit students into the field of dietetics.

Significance

To date, this research represents the largest data gathering study on career-decision making in the field of dietetics. The large sample insured that regional differences, if they existed, in the data would be reflected in the analysis.

Additionally, unlike the instruments used by other researchers, the

questionnaire used in this study was designed to readily isolate factors which influenced career choice. The advantage of using a research tool which asked students to “rate” versus “rank” their responses was demonstrated when students responded to Question 4. It was evident from the responses to this question, that for the majority of students a single person did not emerge as having had a primary influence on their career choice. If these same students were asked to “rank” this influence, the person who emerged as a first choice may have been falsely perceived as having more influence than what a “rating” system may have demonstrated.

Limitations

Students who completed the questionnaire had some course work in dietetics, and contact with program faculty. These contacts could have potentially altered some of the students’ responses. Students may have subconsciously answered questions according to their current feelings and beliefs, instead of rating factors according to how important they were at the time they made their decision to become a dietitian.

Recommendations

Research on career recruitment in the field of dietetics has been limited. There exists a vast opportunity for additional studies which could provide further insight into this area. Significant findings from this research, or the lack thereof, have opened the door to several issues which need further exploration.

This research generated a large pool of information on career decision-making for students who pursue dietetics. For the most part, these students represented the views of Caucasian women. As previously discussed, only a

small number of males and non-whites were represented in the student dietetic population. This demographic information was reflective of ADA's membership. As noted by other researchers, both male and minority students represent a relatively untapped pool of candidates. Men represent approximately 50% of the population, however only 10% appear to be pursuing dietetics as a career choice. The number of men who graduate to become dietitians is probably less.

To increase the number of males in dietetics more information on the factors which influence their career choice needs to be obtained. This study was able to gather data which included information on male dietetic students and some gender comparisons were made. However, if the pool of male candidates is to be expanded, information needs to be sought from those male students who did not select dietetics as a career.

Before broad-based career decision-making information is gathered more specific information should be elicited on male dietetic students. Since this population group is small, a study which over samples the segment of male dietetic students may be preferred. Similarities and differences between male dietetic students and career-decision making patterns of the general male population can then be explored. Scientifically based research will form a solid foundation for recruitment initiatives aimed at increasing the number of male dietitians.

Similarly to males, minority students continue to be under-represented in the field of dietetics. Population trends reflect a pattern of growth within most minority groups. Non-whites represent an expanding market of potential applicants which should be cultivated. In this research, no significant differences were found between Caucasian and Afro-American students and their rating of factors which influenced career choices. It should be noted, that it

was beyond the scope of this project to pursue additional ethnic data analysis; however, this information is important. The assumption can not be made from this research, that ethnic differences do not exist in career decision-making. Indeed, other researchers have demonstrated that factors which influence career decision do vary with race.

This author recommends that further research be undertaken to determine what, if any, differences exist between whites and non-whites in their career decision-making process. Data on minority groups should be analyzed independently, versus collectively, to allow for any cultural differences and similarities between the groups to emerge. Afro-Americans comprise the largest minority group with continued growth expected. Future research exploring opinions of Afro-Americans about dietetics remains a priority.

The influence of financial rewards on career decision making appears to be an overlooked area of study. Only minimal attention has been given to the influence financial rewards may have on career selection. More data which addresses monetary compensation, and the role it plays in career selection, needs to be gathered. It is this author's sense that financial rewards may be more significant when recruiting male and minority students, than white females; and in retention versus recruitment in general. Certainly perception toward money and its influence on career decision should be explored in some detail in any research which targets minorities or males as the sample population.

It was beyond the scope of this project to explore additional information on ethnic, gender, or regional differences with respect to variables that influence career choice. However, data gathered from this research would allow several of those comparisons to be made. The influence of various people, such as

teachers, parents, and guidance counselors have on career decision in whites and non-whites, as well as males and females, could be explored. In addition, the influence media informational sources, such as career videos, and college catalogs have on career choice in whites and non-whites could be examined. Some research has demonstrated that non-whites respond more favorably to visual versus written media sources (Rodenstein, 1990). Gender differences may also be present.

Gender, and / or ethnic origin, may also influence areas of interest within the field of dietetics; this was not explored in this study. Markley and Huyck (1992) found that minorities rated management opportunities as having more of a positive influence on their career choice than white students. Career influences can also be compared with individual minority groups and whites. Cultural differences, which may affect career selection of Afro-Americans, Asians, and Hispanics could be explored.

Differences between men and women and their areas of interest in the field of dietetics has yet to be explored. Data from this study could also be used to examine if any relationship exists between geographical area and student's stated area of interest in the field of dietetics. Probably some of the most fruitful gender information could be obtained by matching a subset of men and women for age and race. This would allow for more careful examination of gender influence on career selection.

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APPENDIX 1

Cover Letter A (First Mailing)

April 25, 1991

Dear Program Director:

On behalf of the New York State Genesee Dietetic Association and as my master's thesis at Rochester Institute of Technology, I am conducting research on how and why students chose dietetics as a career path. It is the goal of the New York State Genesee Dietetic Association to use the results of the enclosed questionnaire to develop recruitment materials. The students' responses to the questionnaire will promote the field of dietetics and ultimately benefit the profession and clients by attracting qualified candidates to the profession.

I have enclosed a brief questionnaire to be administered to all freshmen dietetic students enrolled in your Plan IV/V program. It is vital to our research efforts that all questionnaires be compiled and returned in the enclosed self-addressed envelope by May 14, 1991. Should you require additional questionnaires, please feel free to make copies.

Thank you for taking part in our dietetic career questionnaire. Your time and participation is greatly appreciated. If you have any questions regarding this research project, please don't hesitate to call me at (716) 473-9423.

Very truly yours,

Katherine A. Kobel, R.D.
RIT Graduate Student

Elizabeth Kmiencinski, M.S., R.D.
Assistant Professor, Dietetics/Nutrition

Appendix 2

Cover Letter B (Second Mailing)

October 4, 1991

Dear Program Director:

Thank you for your interest and willingness to participate in the administration of a questionnaire on recruitment in the field of dietetics. The project is being funded by Rochester Institute of Technology as part of my master's thesis.

Originally my goal was to have the survey administered Spring of 1991 to freshman dietetic students. Feedback from several of the colleges indicated that: 1.) fall is the preferred time to survey students and, 2.) many student do not declare their major until some time after their first year in college.

For these reasons, a few changes have been made with the questionnaire. As many of you know, we decided to delay administering the questionnaire until the Fall of 1991, in hopes of improving the response rate. Additionally, in an effort to obtain the most useful data, we have broadened the survey to include all undergraduate dietetic students in Plan IV/V (Didactic Programs), instead of just freshman.

Please identify which response best explains your situation.

1. *For those schools that retained the questionnaires we mailed this spring, we are sending this letter as a reminder to go ahead and administer the surveys at this time.*
2. *If you had returned the blank questionnaires to us, you will find we have enclosed copies of the questionnaire with this letter. If you need additional questionnaires please feel free to make the copies within your department, or notify us and we will be glad to send additional copies.*

In summary, please administer the enclosed questionnaires to all undergraduate students in your Plan IV/V (Didactic Program) at your earliest convenience, and preferably prior to October 31, 1991. An instructor's direction sheet has been enclosed to read/post to respondents when possible.

Thank you for your patience with the necessary adjustments we have made. We look forward to sharing the data in 1992! If you have any questions regarding this research project, please do not hesitate to call us at (716) 473-9423.

Very truly yours,

Katharine A. Kobel, R.D.
RIT Graduate Studies

Elizabeth Kmiecinski, M.S., R.D.
Assistant Professor-Dietetics/Nutrition

Appendix 3

Instruction Sheet (for Second Mailing)

DIRECTION SHEET FOR DIETETIC QUESTIONNAIRE

Please read (post or copy), the instructions below to those students who will be administered the questionnaire.

1. At the top of the front page, after the instructions for completing the survey, and before question number one, please list your year in school. For example, freshman, sophomore etc. Note: There is not a specific question or space provided for this information.
2. Please take a minute and look at question number two. If your response to question number two is "college", please list the year in college that you made the decision to become a dietitian. The year can be placed next to the word "college".

NOTES:

Thank You!

Appendix 4

Questionnaire (Side One)

DIETETIC CAREER QUESTIONNAIRE

The following is a nationwide survey to obtain information on how/why students select dietetics as a career choice. We plan to use the information to develop recruitment materials for the field of dietetics. The questionnaire (front and back) takes approximately 10 minutes to complete. Please answer each question as accurately as you can. Thank you for your time.

1. Several factors may, or may not have influenced your career choice. Was there one point in your life when you decided to pursue a career in dietetics?

_____yes _____no

If yes, continue to question #2.

If no, skip question #2 and go to #3.

2. When you made the decision to become a dietitian at what particular point in your life were you? (Select only **one** response).

_____As far back as I can remember

_____Junior high school (7th & 8th grade)

_____9th or 10th grade

_____11th or 12th grade

_____College

_____After exposure through work experience

_____Other: _____

3. Different factors might have an influence on which career choice a person will make. Rate how important the following items were in helping you decide to become a dietitian. (Circle your response. With #1 being **not** important and #5 being **very** important).

Key

SD= Standard Deviation

	NOT			VERY	MEAN	S.D.
Opportunity for advancement.....1	2	3	4	5	3.36	1.20
Positive comment about dietetics.....1	2	3	4	5	3.62	1.10
Financial reward.....1	2	3	4	5	3.06	1.11
Diverse work environment.....1	2	3	4	5	3.99	1.00
Part-time work opportunities.....1	2	3	4	5	3.11	1.34
Opportunities to help others.....1	2	3	4	5	4.46	0.77
A job that you enjoy.....1	2	3	4	5	4.68	0.63
Working with people.....1	2	3	4	5	4.45	0.77
Interest in nutrition.....1	2	3	4	5	4.80	0.50
Other: _____.....1	2	3	4	5		

Appendix 5
Questionnaire (Side Two)

4. Several people might have influenced your career choice. Please rate the level of influence each of the following people had in your decision to become a dietitian. (Circle your response. With #1 being **low** influence and #5 being a **high** influence.)

Key SD= Standard Deviation

	LOW					HIGH	MEAN	S.D.
Teacher.....	1	2	3	4	5		2.62	1.55
Grandparent.....	1	2	3	4	5		1.50	1.01
Friends.....	1	2	3	4	5		2.34	1.34
Mother.....	1	2	3	4	5		2.71	1.49
Father.....	1	2	3	4	5		2.25	1.39
Sibling.....	1	2	3	4	5		1.88	1.24
Other Relative.....	1	2	3	4	5		1.79	1.26
Guidance Counselor.....	1	2	3	4	5		1.90	1.28
An employer.....	1	2	3	4	5		1.97	1.38
Other:.....	1	2	3	4	5			

5. When making a career choice some individuals might use specific sources of information to assist them. How useful were the following sources of information in helping you make your career choice? (Circle your response. With #1 being **NOT** at all useful and #5 being **VERY** useful. Circle **"N/A"** if Information Source was not used.)

INFORMATION SOURCE	N/A	HOW USEFUL					MEAN	S.D.
		NOT				VERY		
Literature from high school guidance office..	N/A	1	2	3	4	5	1.78	1.15
Literature from Dietetic Association.....	N/A	1	2	3	4	5	2.93	1.35
University/college catalogs.....	N/A	1	2	3	4	5	3.50	1.21
Career videos/films/film strips.....	N/A	1	2	3	4	5	2.25	1.29
Computer based career search.....	N/A	1	2	3	4	5	2.32	1.39
Other:.....	N/A	1	2	3	4	5		

6. Was there anything you wished to know more about when you were investigating career choices in dietetics that was not available or might have been helpful?

7. There are many different areas within the field of dietetics which may interest you. Check the **TWO** major areas from the list below that most interest you at this time.

- 254 Management/Administrative

700 Consultation & Private Practice

356 Community/Public Health

575 Health Promotion/Wellness

638 Clinical Nutrition

212 Research/Education

133 Food Science

470 Sports Nutrition

Note: Respondents indicated two areas of interest, thus frequency was greater than n=1,695.

8. Please provide the following information as it applies to you.

Year of Birth_____

Sex: _____Female _____Male

Ethnic Group:

_____White

_____Asian

_____Native American

_____Black

_____Hispanic

_____Other

Which area do you consider home?

_____Rural

_____Suburb

_____City

Do you have any relatives in the health field? (e.g. dentist, nurse, dietitian etc.)

_____yes

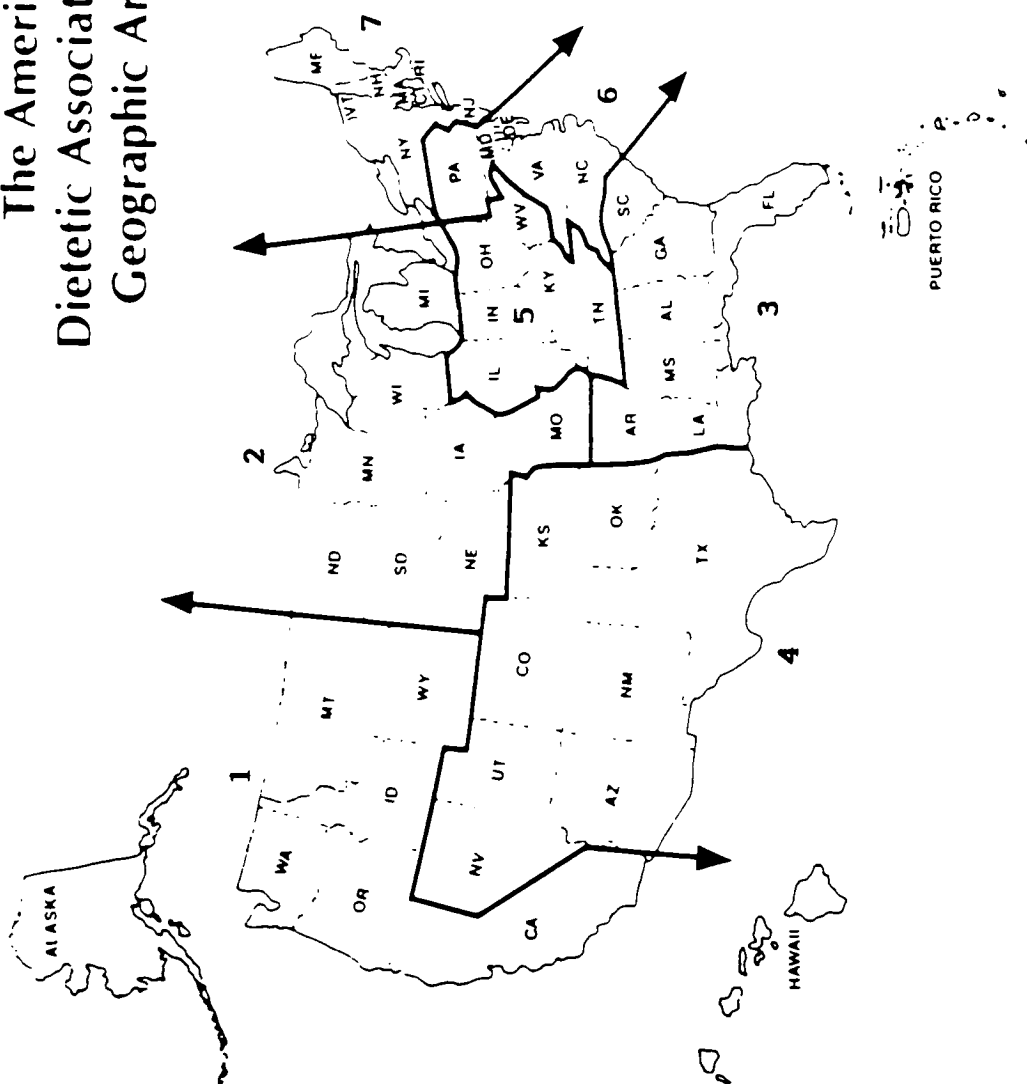
_____no

If yes, please list their occupation and relationship to you. (e.g. dentist/father)

APPENDIX 6

The American Dietetic Association Geographic Areas

The American Dietetic Association Geographic Areas



APPENDIX 7

Geographic Areas Listed by State

Geographic Areas Listed By State

AREA 1: Alaska, California, Hawaii, Idaho, Montana, Oregon, Washington, Wyoming.

AREA 2 : Iowa, Michigan, Minnesota, Missouri, Nebraska, North Dakota, South Dakota, Wisconsin.

AREA : 3 Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, Puerto Rico, South Carolina.

AREA 4 : Arizona, Colorado, Kansas, Nevada, New Mexico, Oklahoma, Texas, Utah.

AREA 5 : Illinois, Indiana, Kentucky, Ohio, Tennessee, West Virginia.

AREA 6 : Delaware, District of Columbia, Maryland, North Carolina, Pennsylvania, Virginia

AREA 7: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, Vermont, American European Dietetic Association.